

Figure 1 Multi-Level Interconnection Architecture I

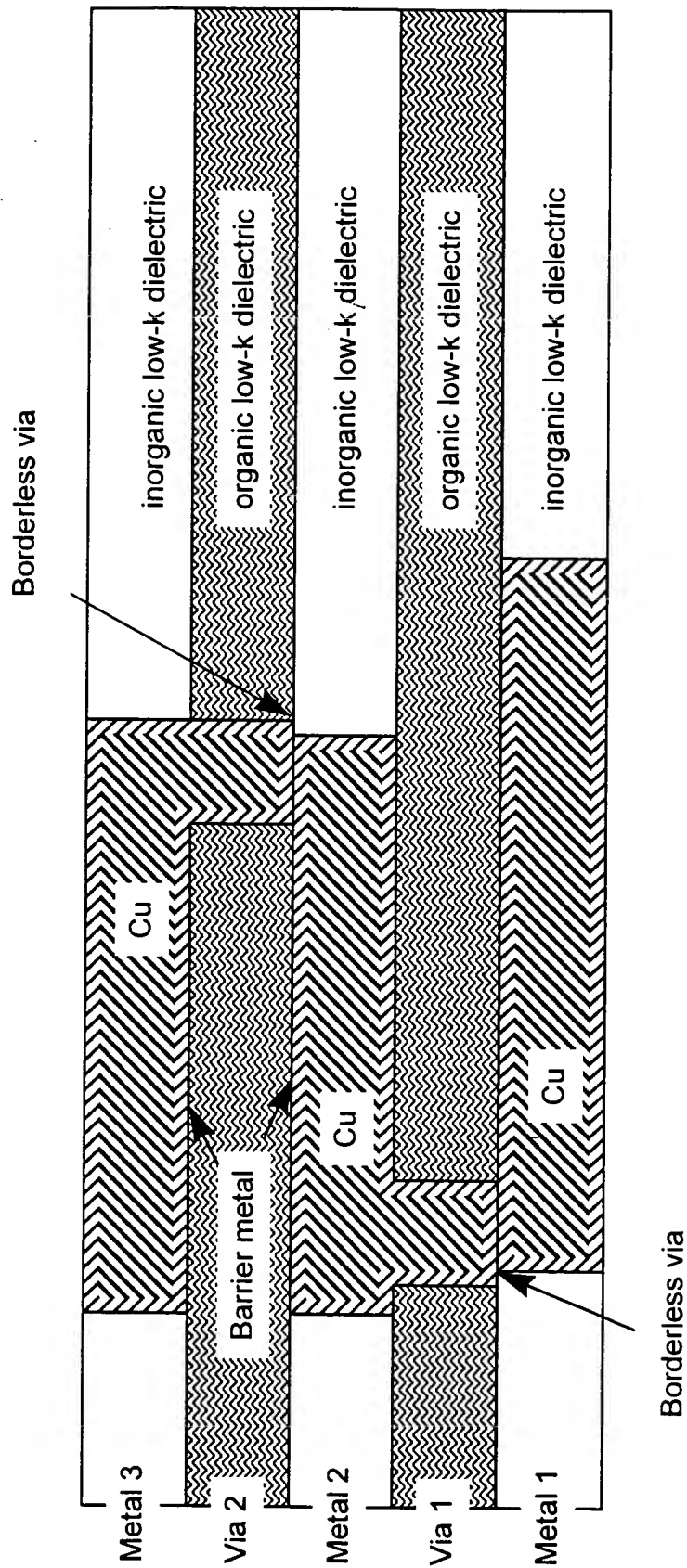


Figure 2 Multi-Level Interconnection Architecture II

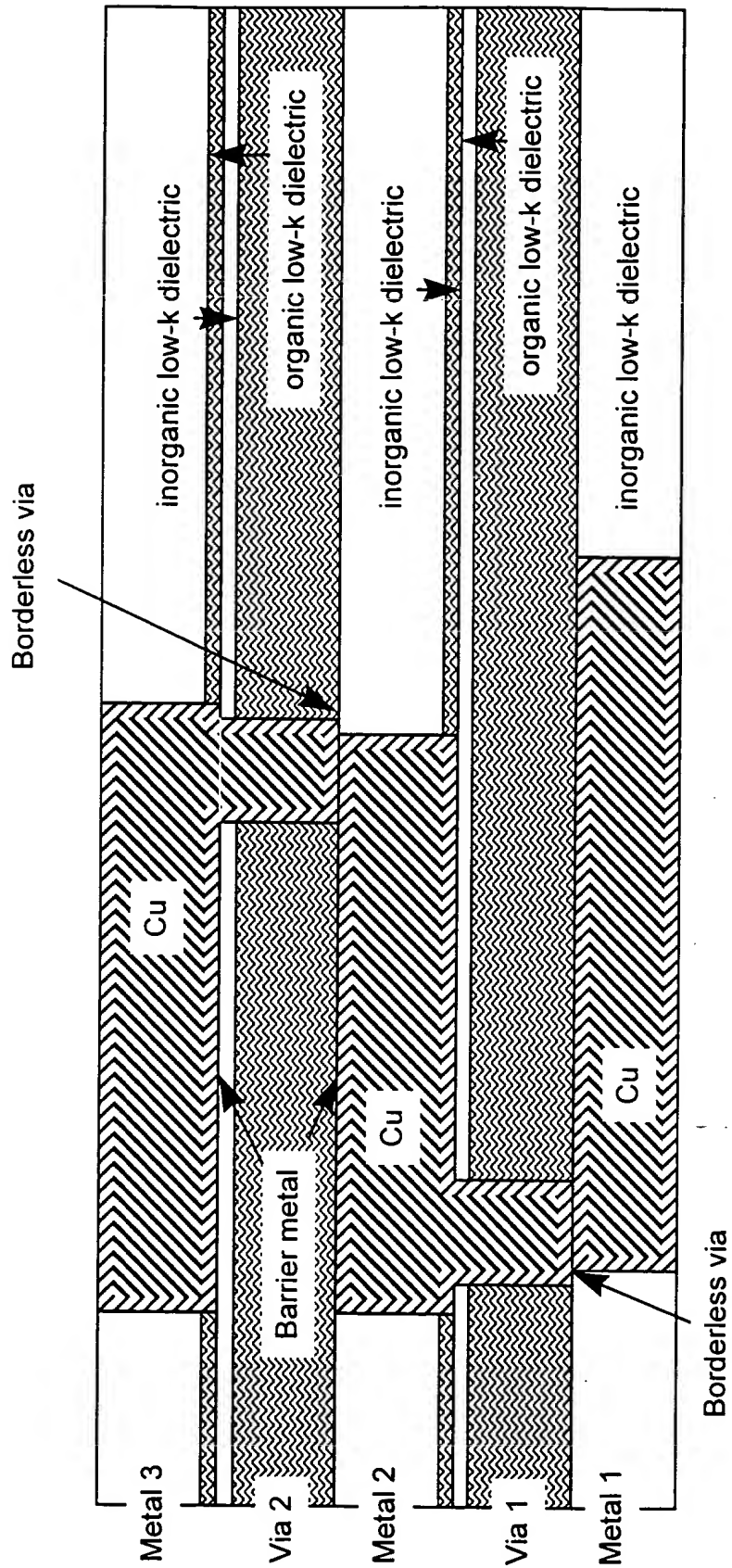


Figure 3

Step 1 Organic low-k dielectric deposition

Step 2 Inorganic low-k dielectric deposition

Step 3 Resist spin and bake

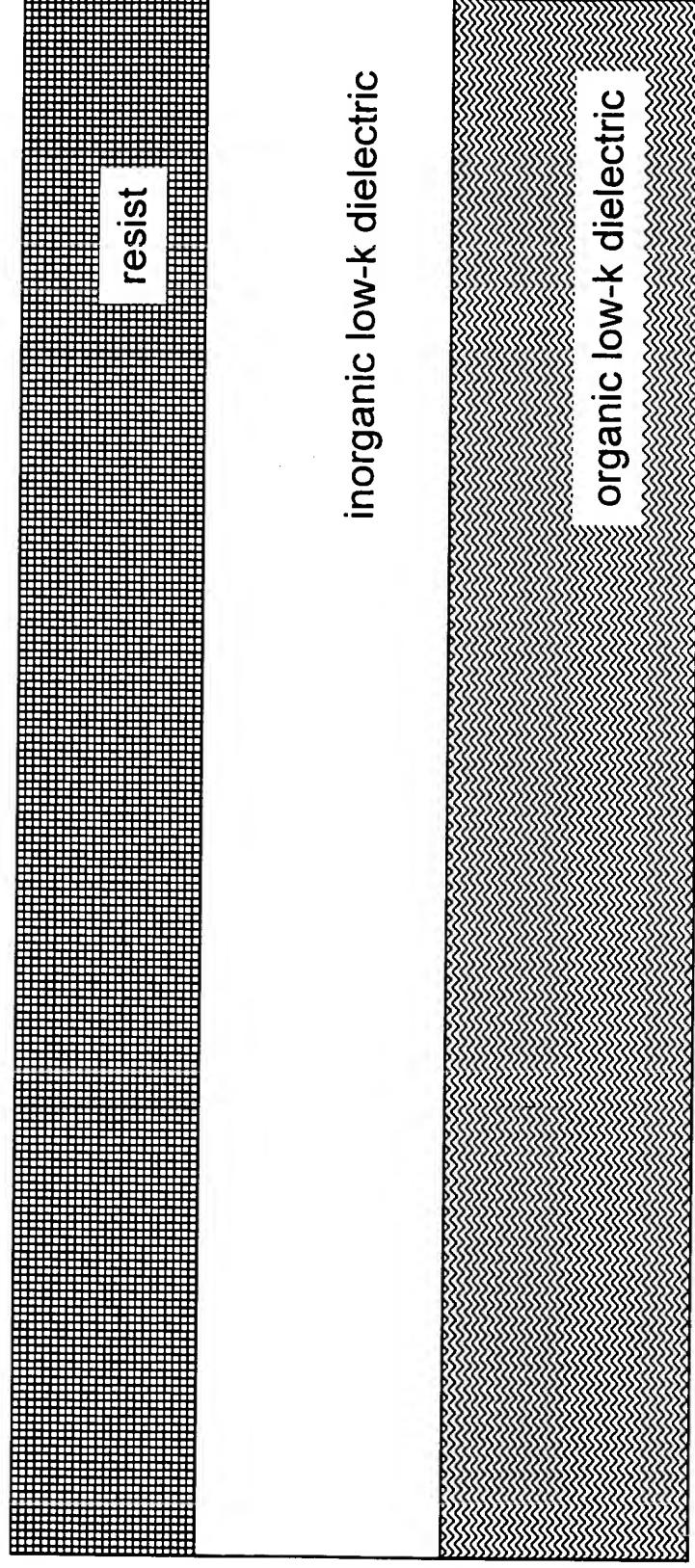


Figure 4  
Step 4 Via mask and resist development  
Step 5 Metal trench inorganic low-k dielectric etch

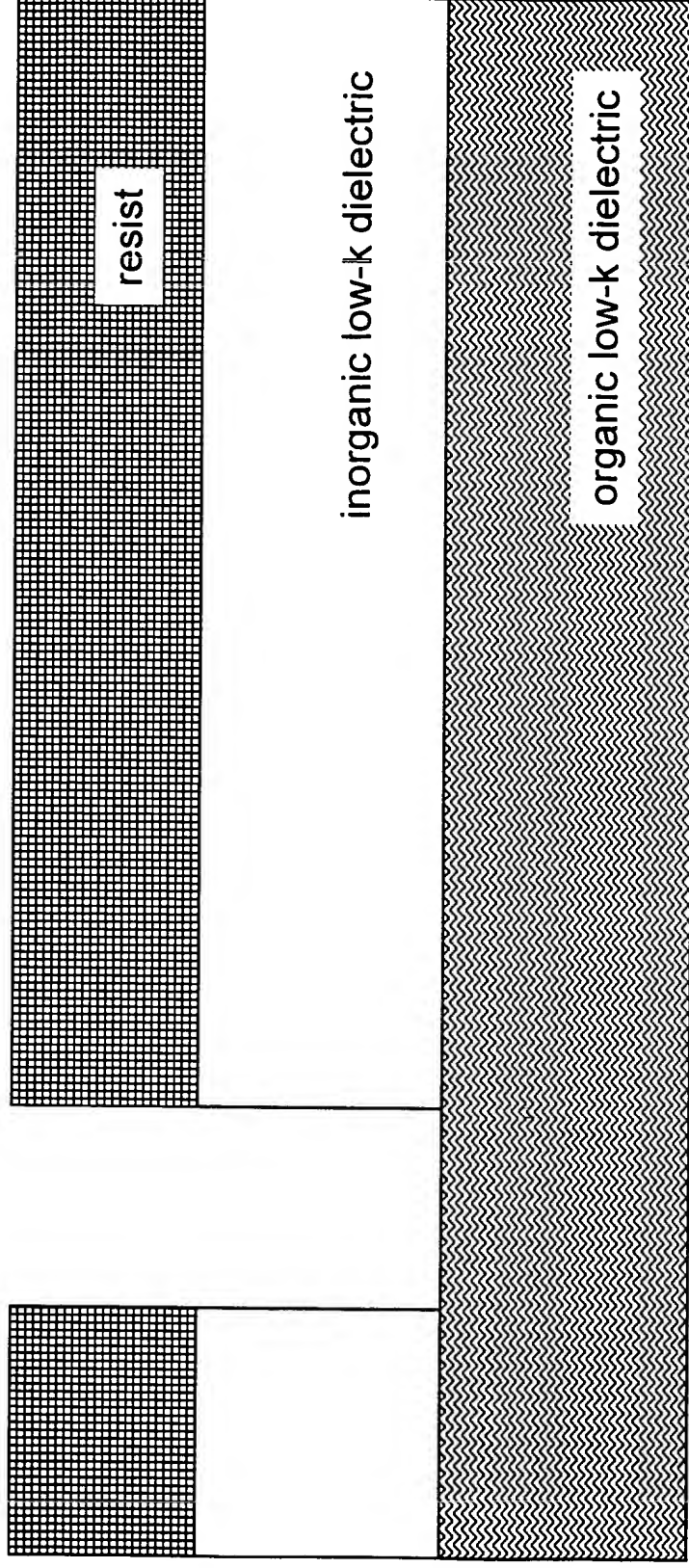


Figure 5  
Step 6 Via organic low-k dielectric etch

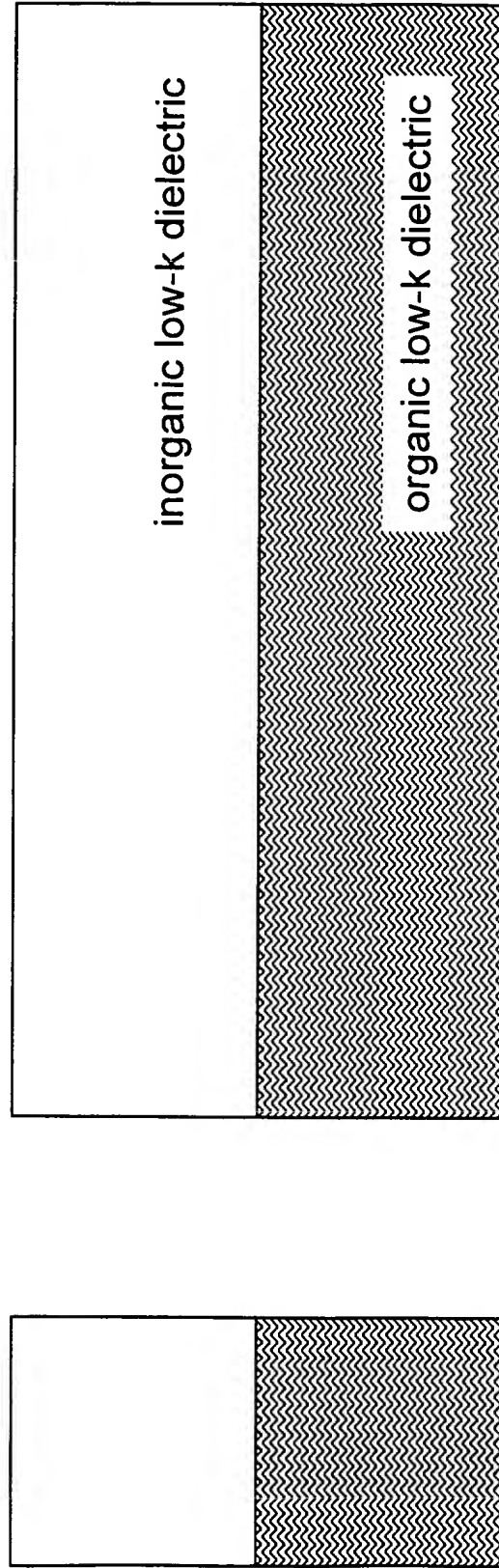


Figure 6

Step 7 Resist spin and bake

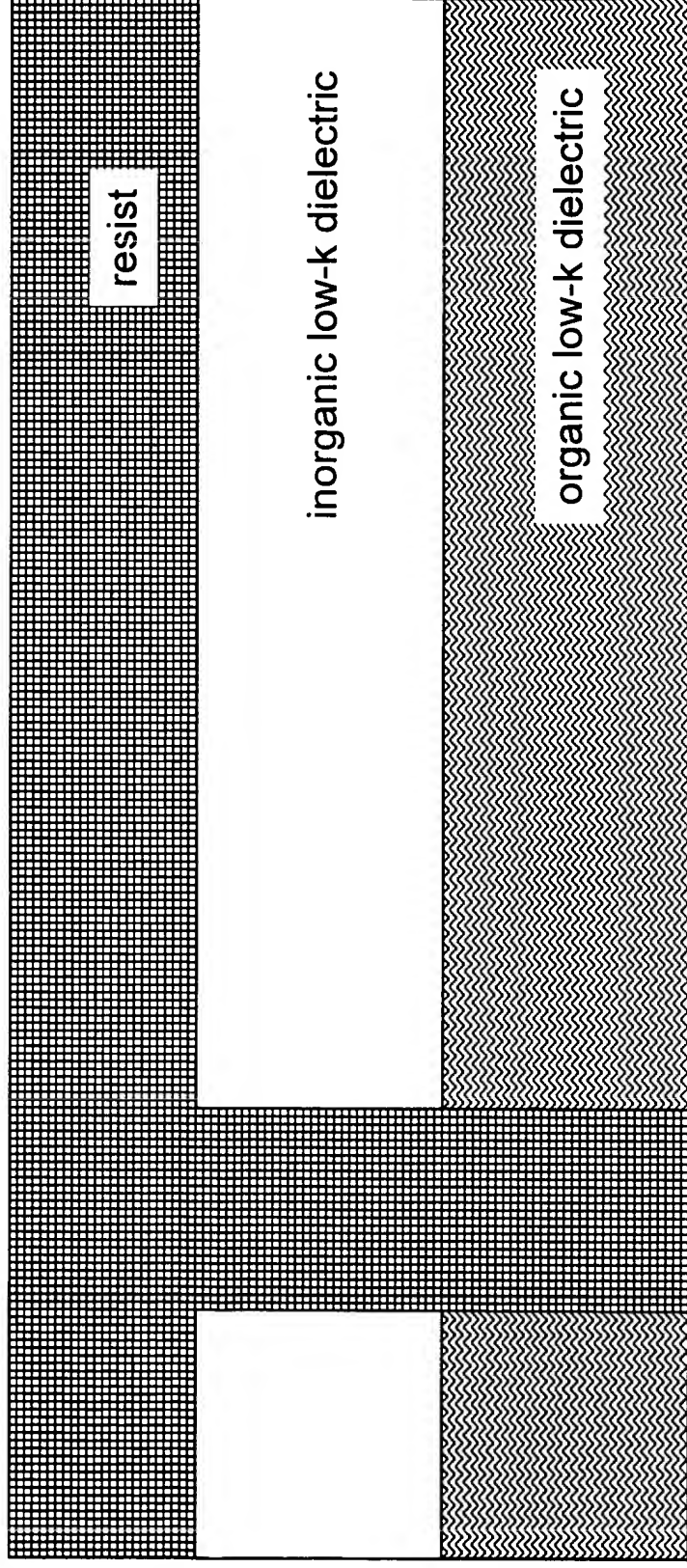


Figure 7  
Step 8 Metal trench mask and resist development

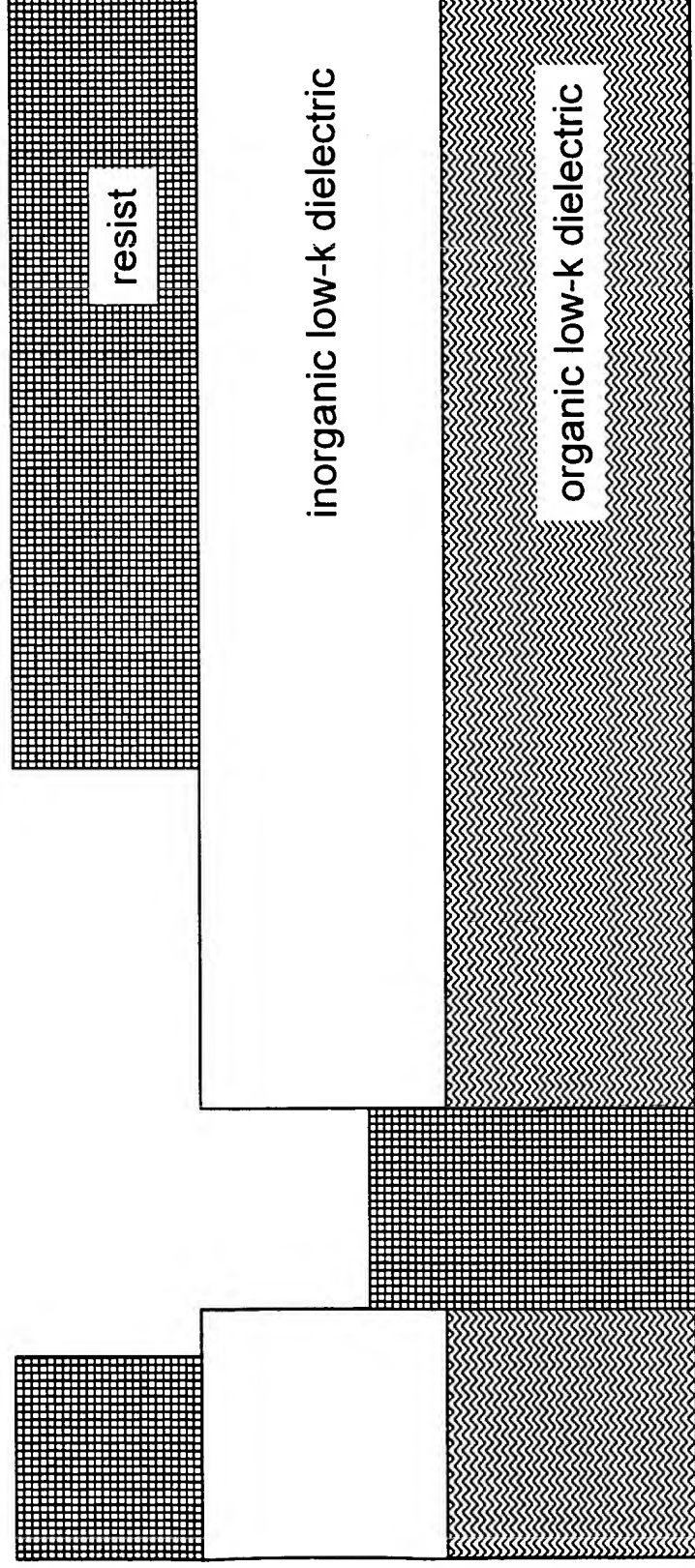


Figure 8

Step 9 Inorganic low-k dielectric etch

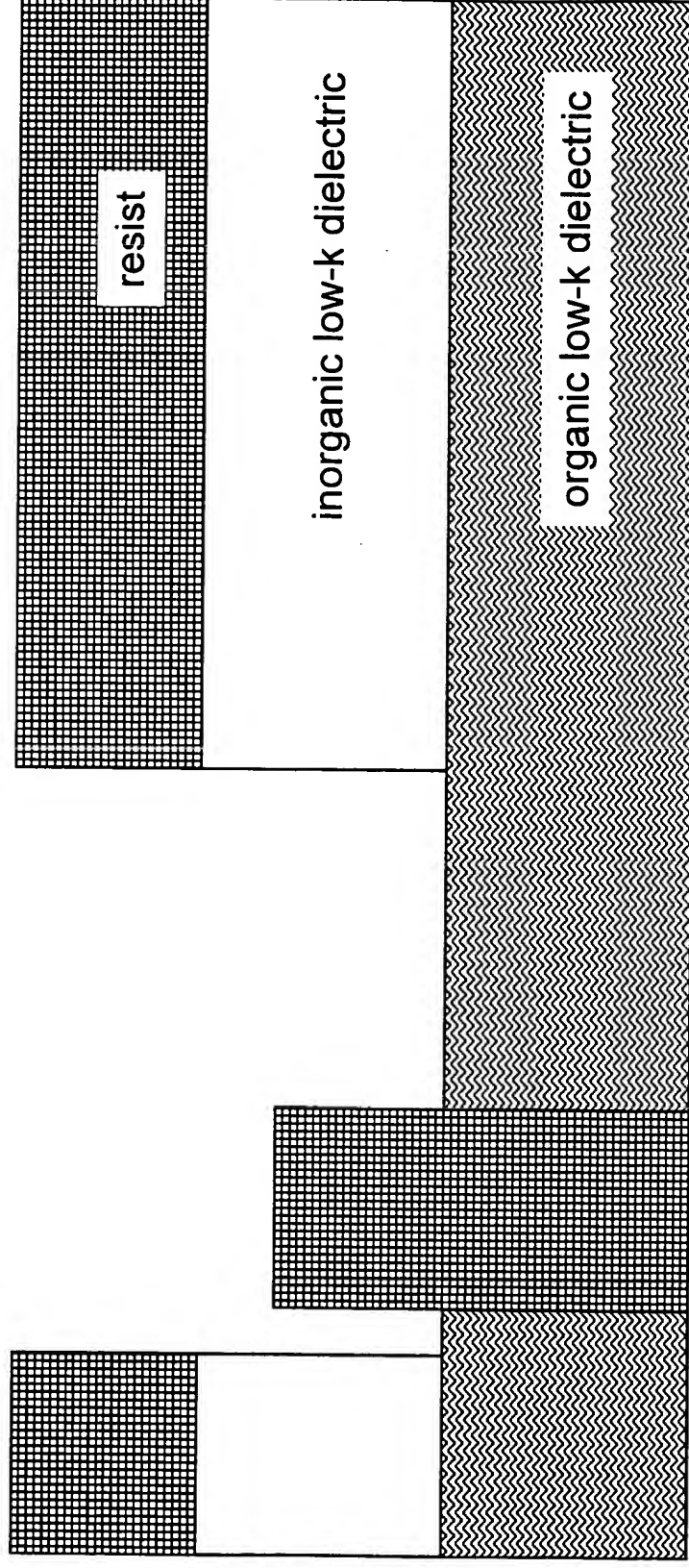


Figure 9

Step 10 Selective removal of resist

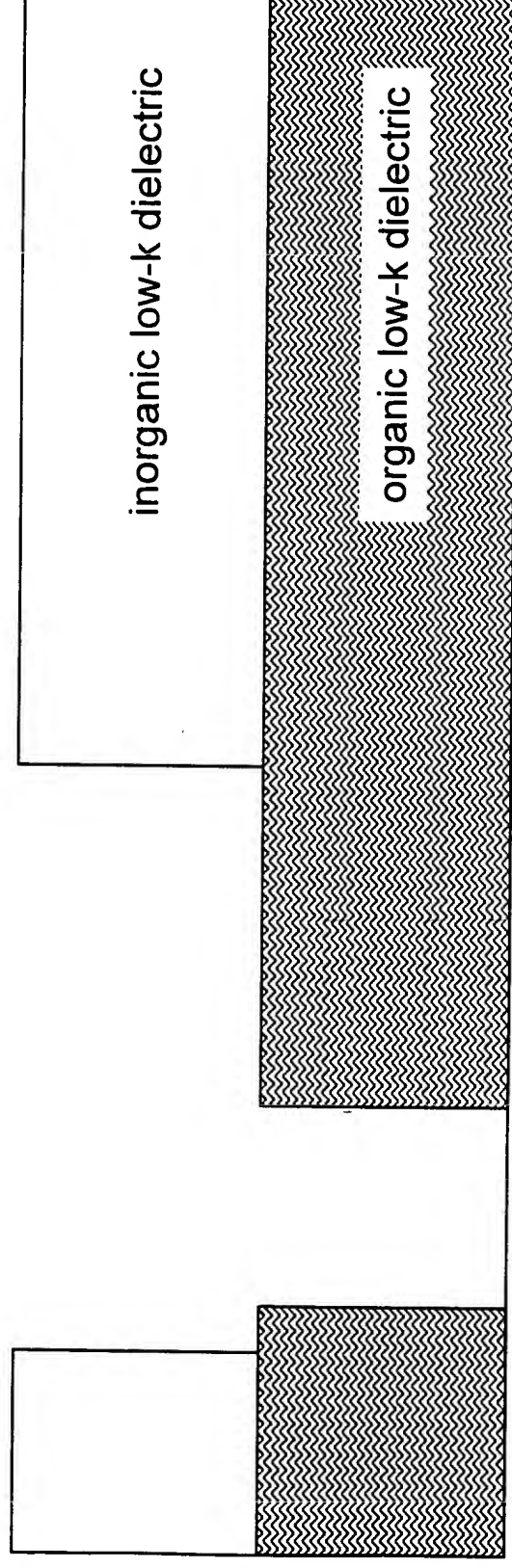


Figure 10

Step 11 Cu interconnect processing

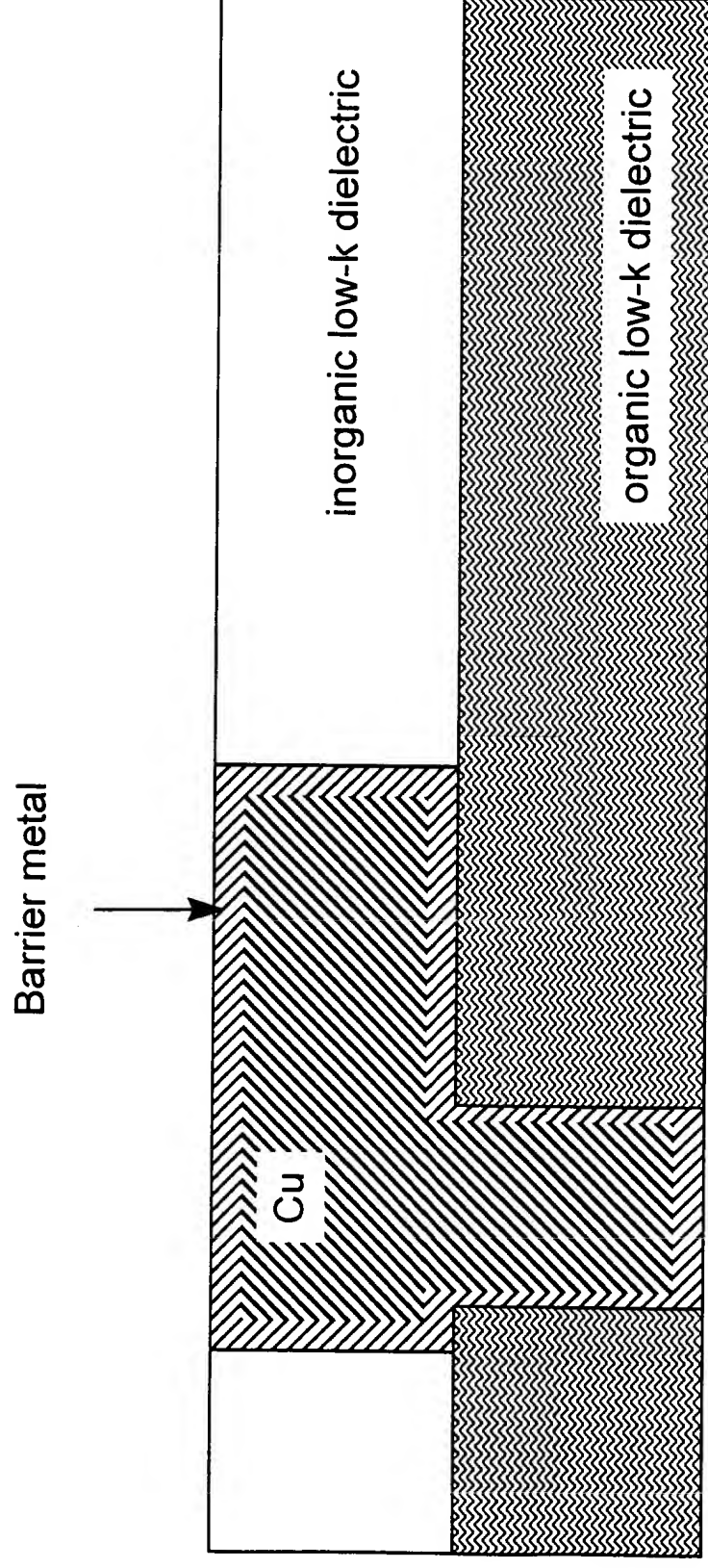


Figure 11

- Step 1 Organic low-k dielectric deposition
- Step 2 Inorganic low-k dielectric deposition
- Step 3 Resist spin and bake

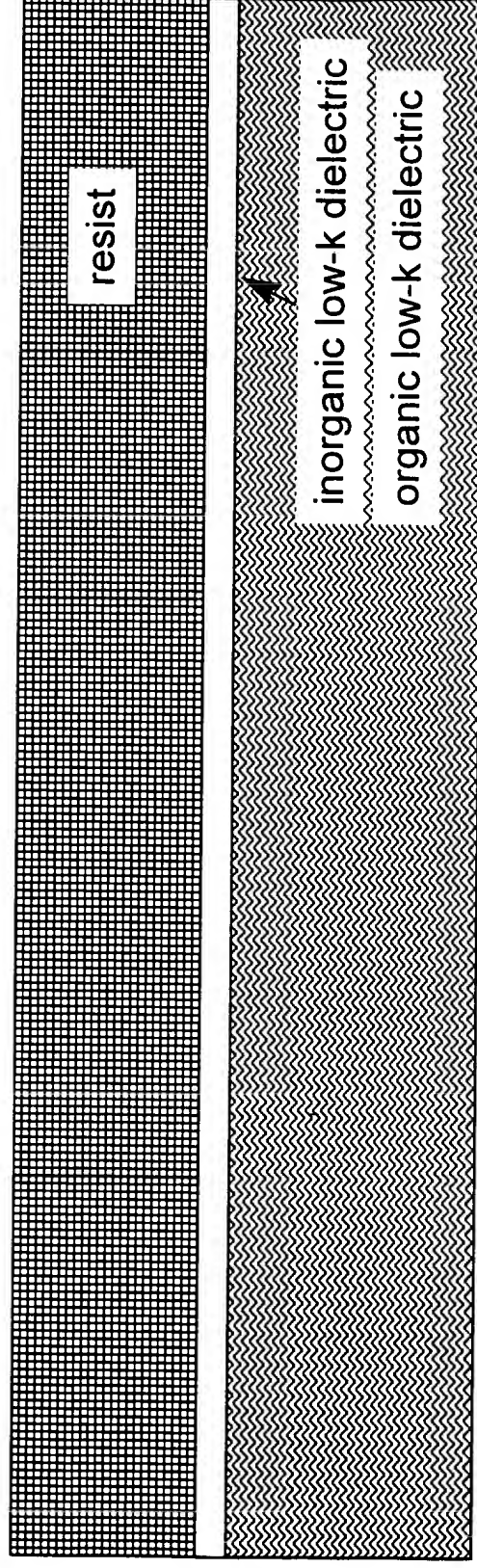


Figure 12

- Step 4 Via mask and resist development
- Step 5 Inorganic low-k dielectric etch

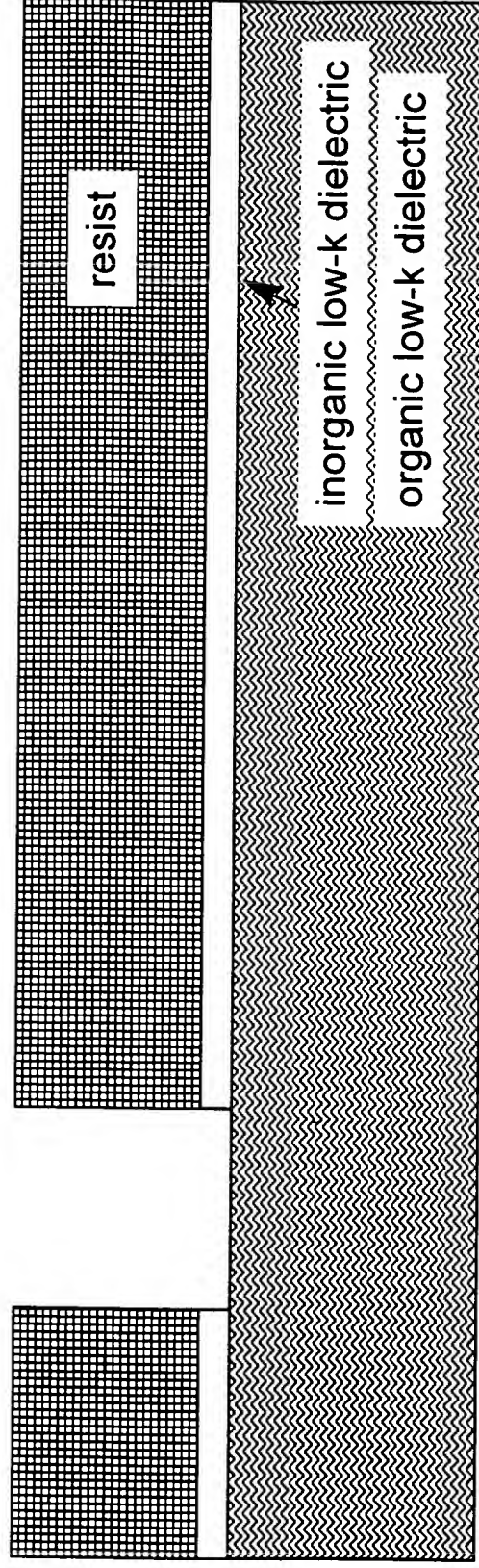


Figure 13

Step 6 Resist removal

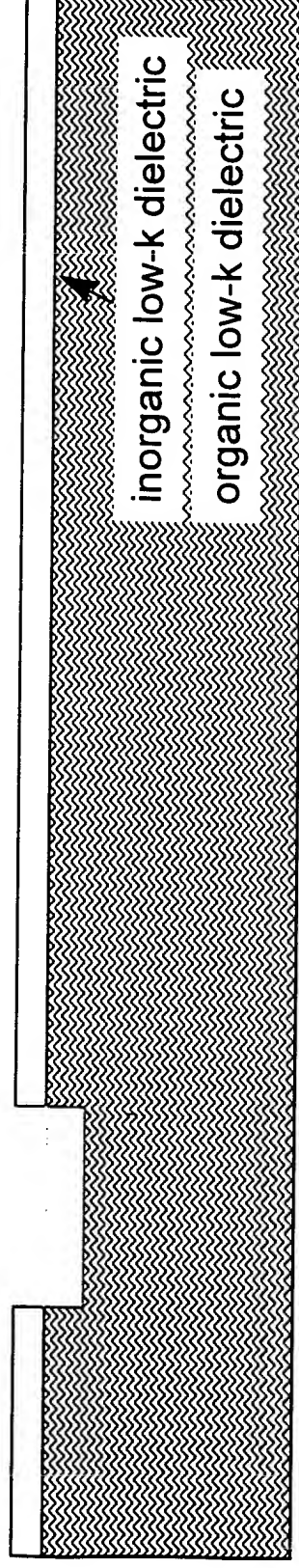


Figure 14

- Step 7 Organic low-k dielectric deposition
- Step 8 Inorganic low-k dielectric deposition
- Step 9 Resist spin and bake
- Step 10 Metal trench mask and resist development

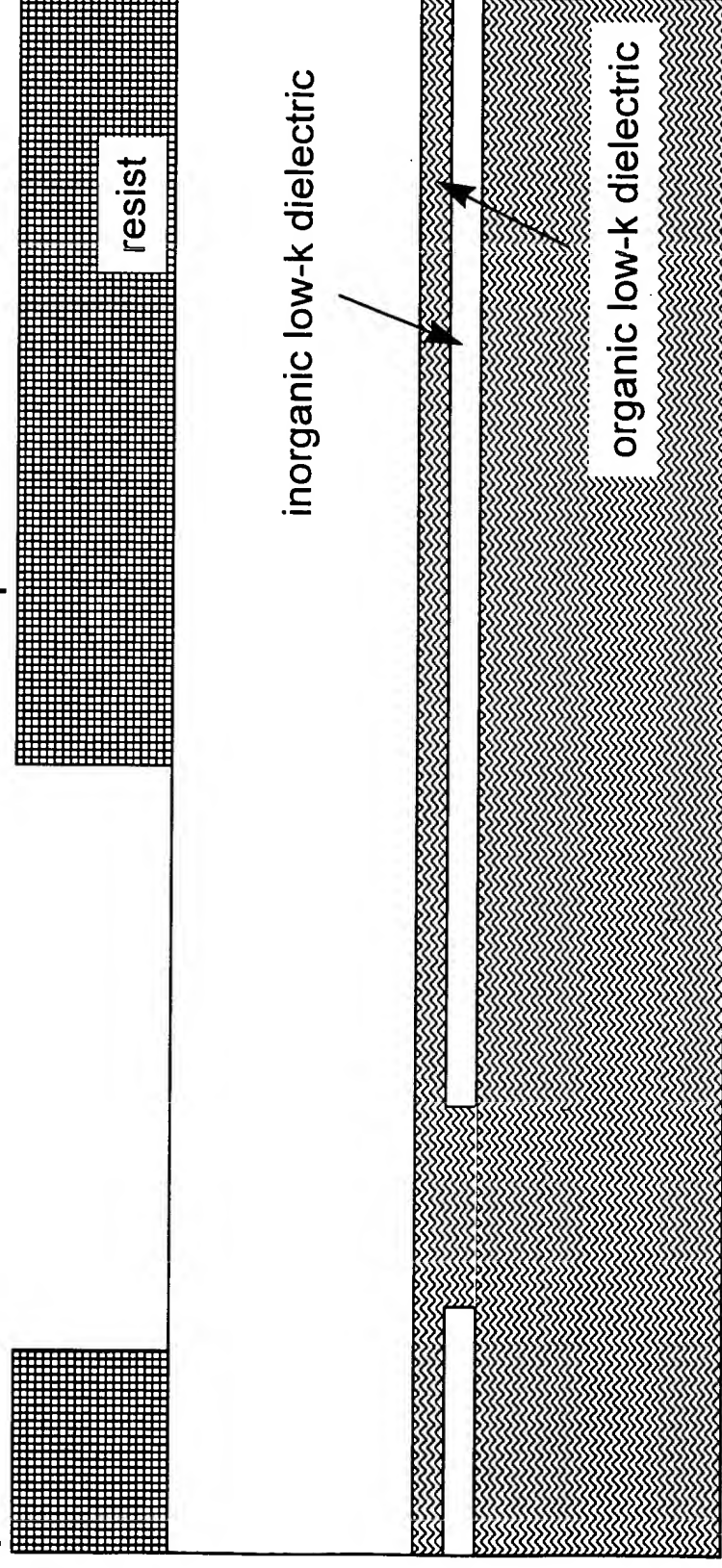


Figure 15

Step 11 Inorganic low-k dielectric etch

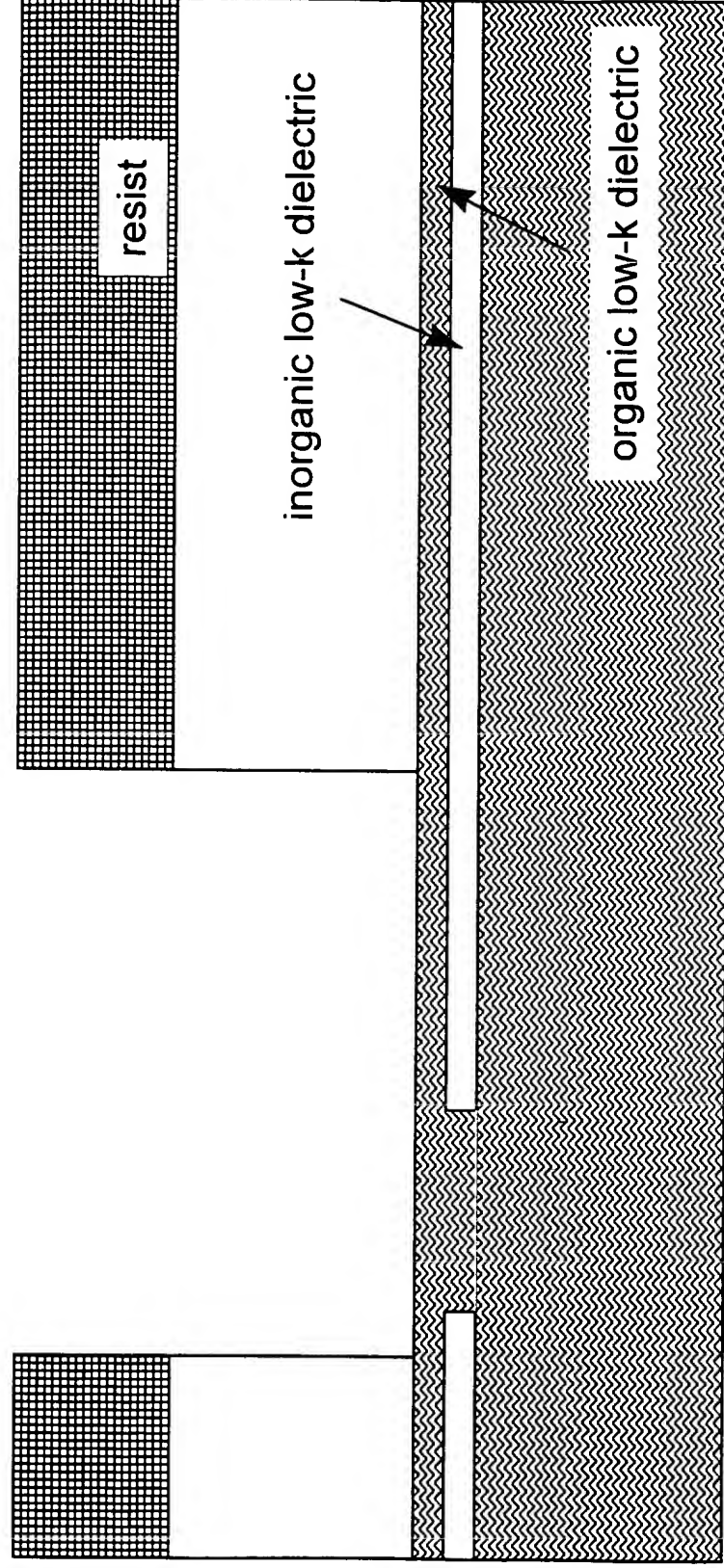
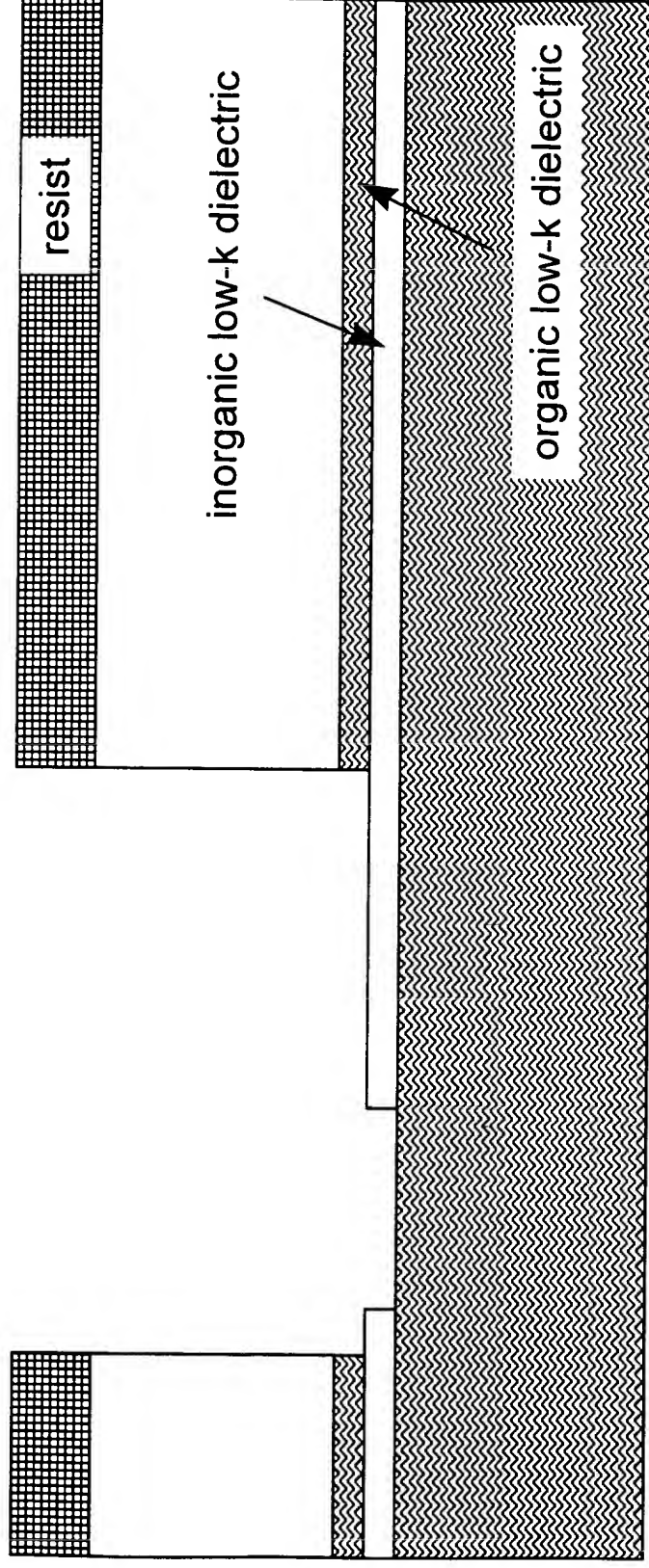


Figure 16

## Step 12 Organic low-k dielectric etch



## Figure 17

## Step 13 Organic low-k dielectric etch

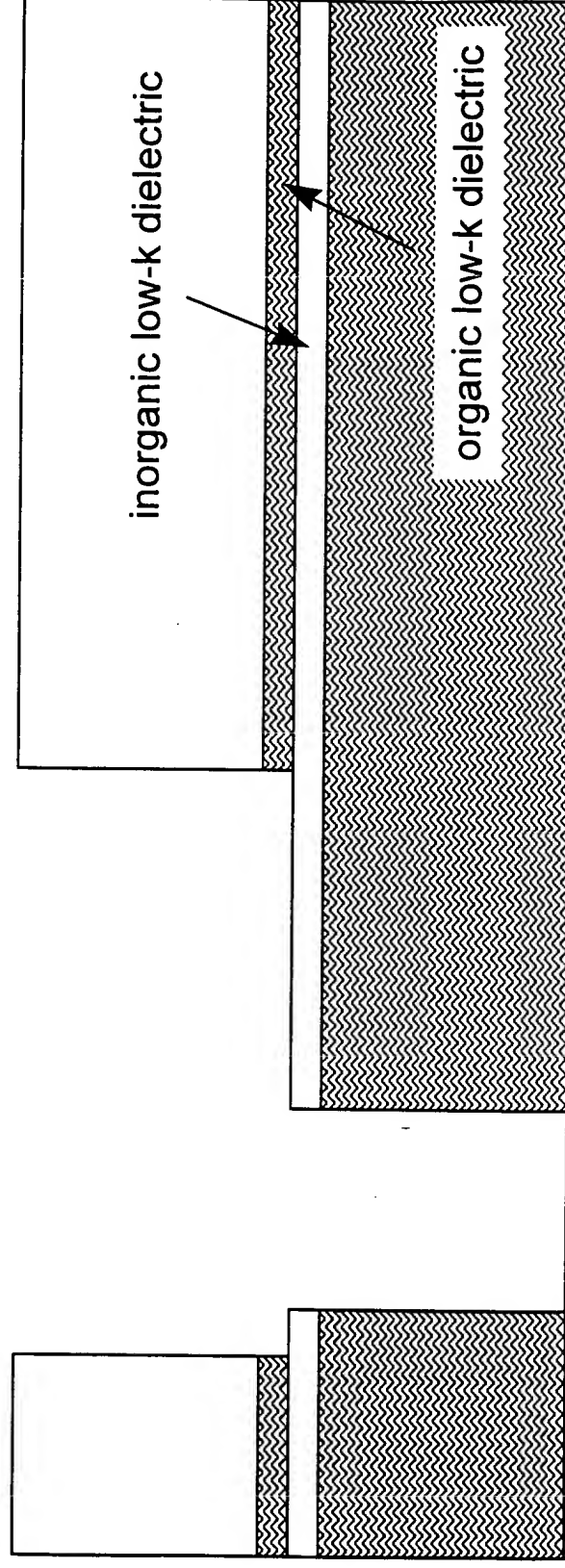


Figure 18

# Step 14 Cu interconnect processing

Barrier metal

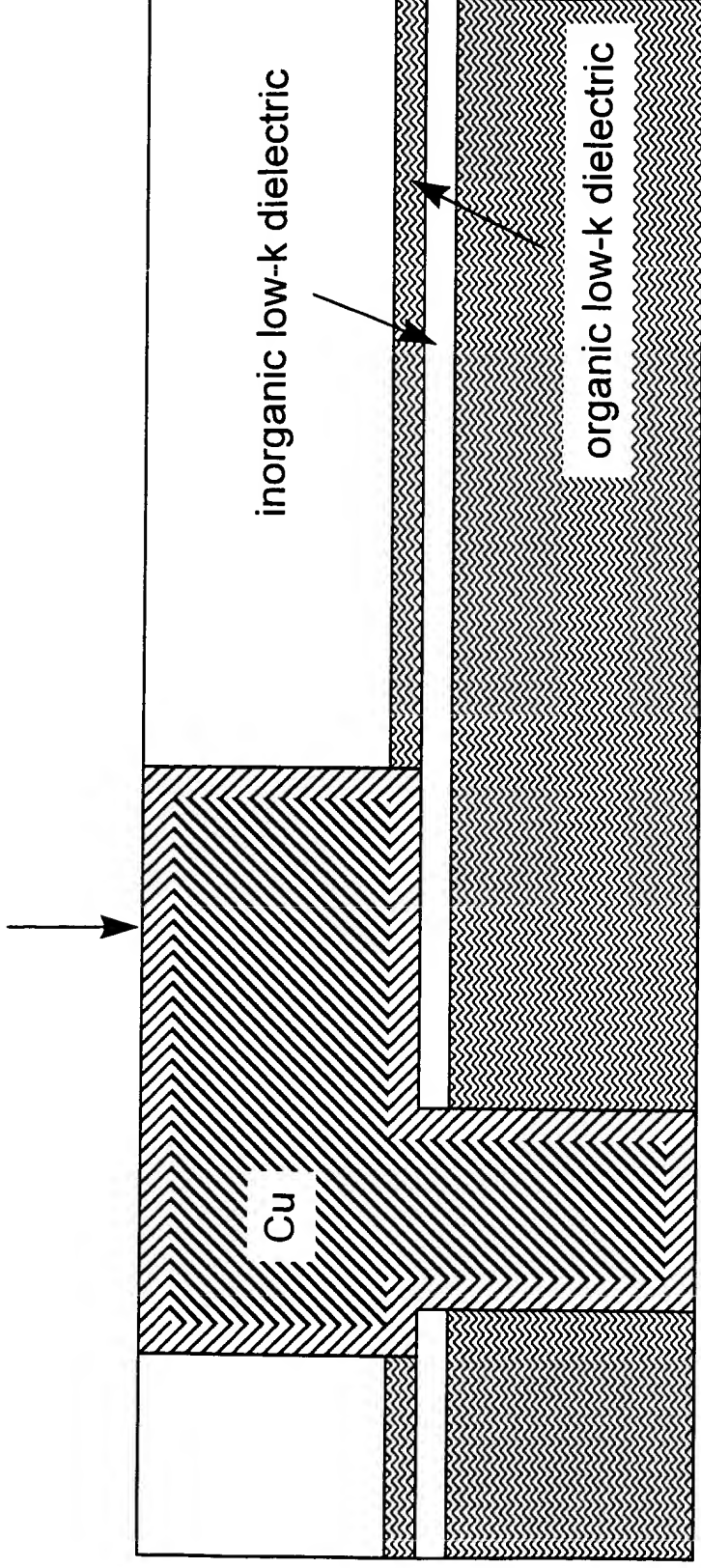


Figure 19

- Step 1 Organic low-k dielectric deposition
- Step 2 Inorganic low-k dielectric deposition
- Step 3 Organic low-k dielectric deposition
- Step 4 Inorganic low-k dielectric deposition
- Step 5 Resist spin and bake

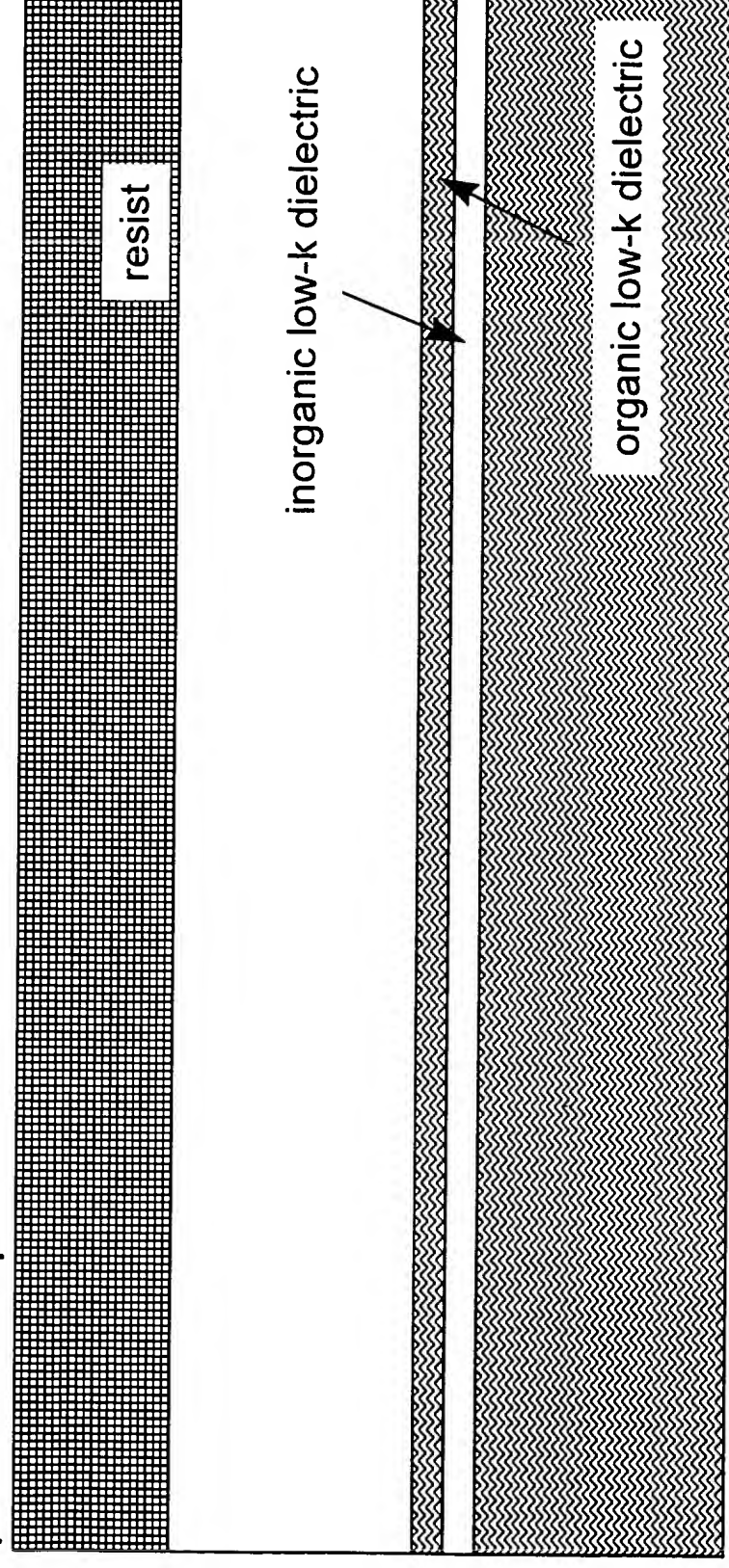


Figure 20

Step 6 Via mask and resist development

Step 7 Inorganic low-k dielectric etch

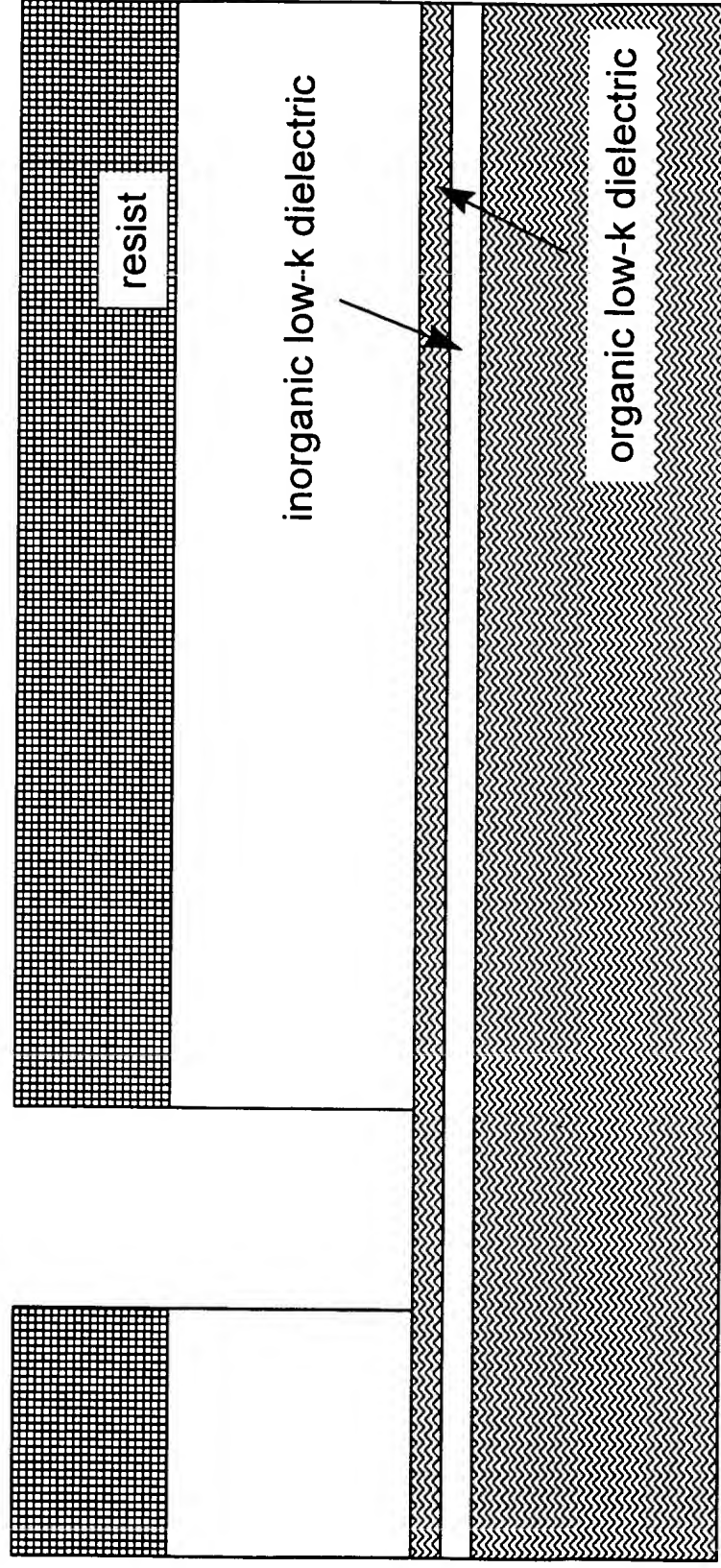


Figure 21

- Step 8 Organic low-k dielectric etch
- Step 9 Inorganic low-k dielectric etch

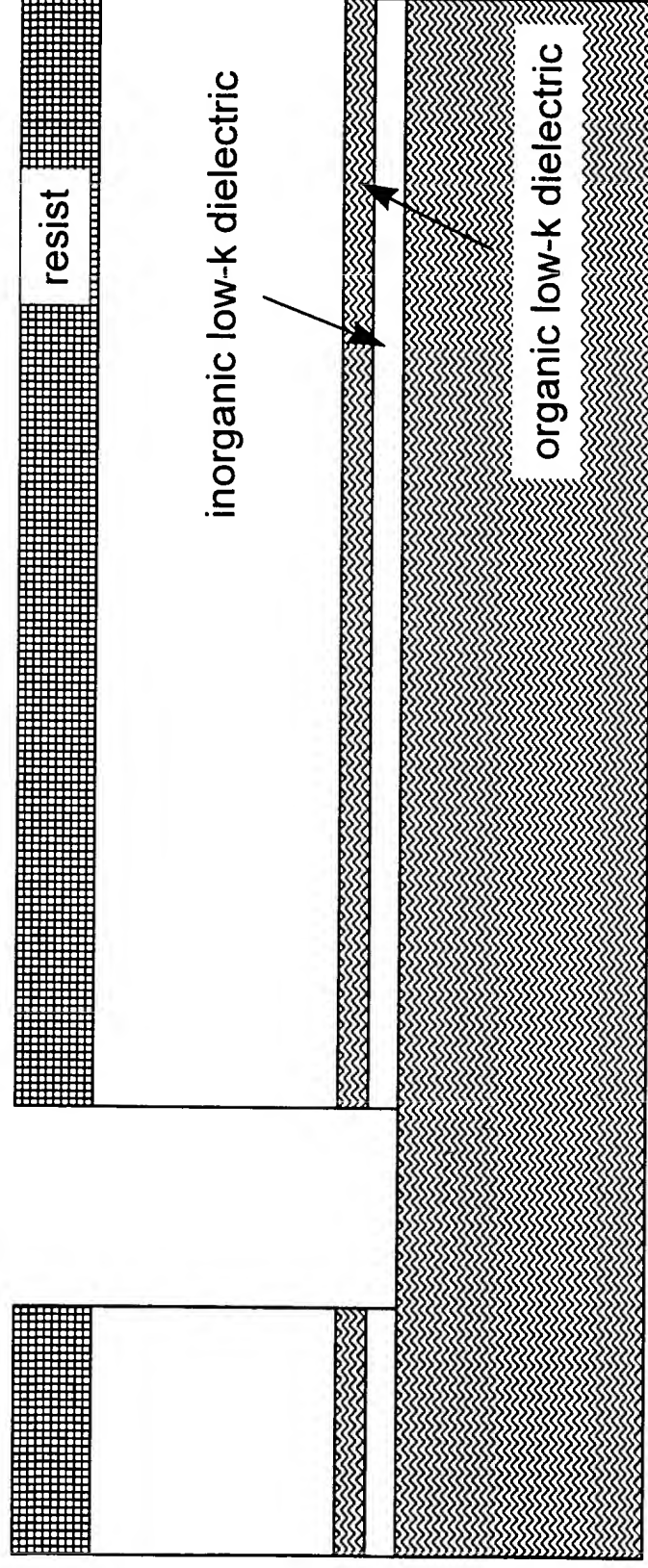


Figure 22

Step 10 Selective resist removal

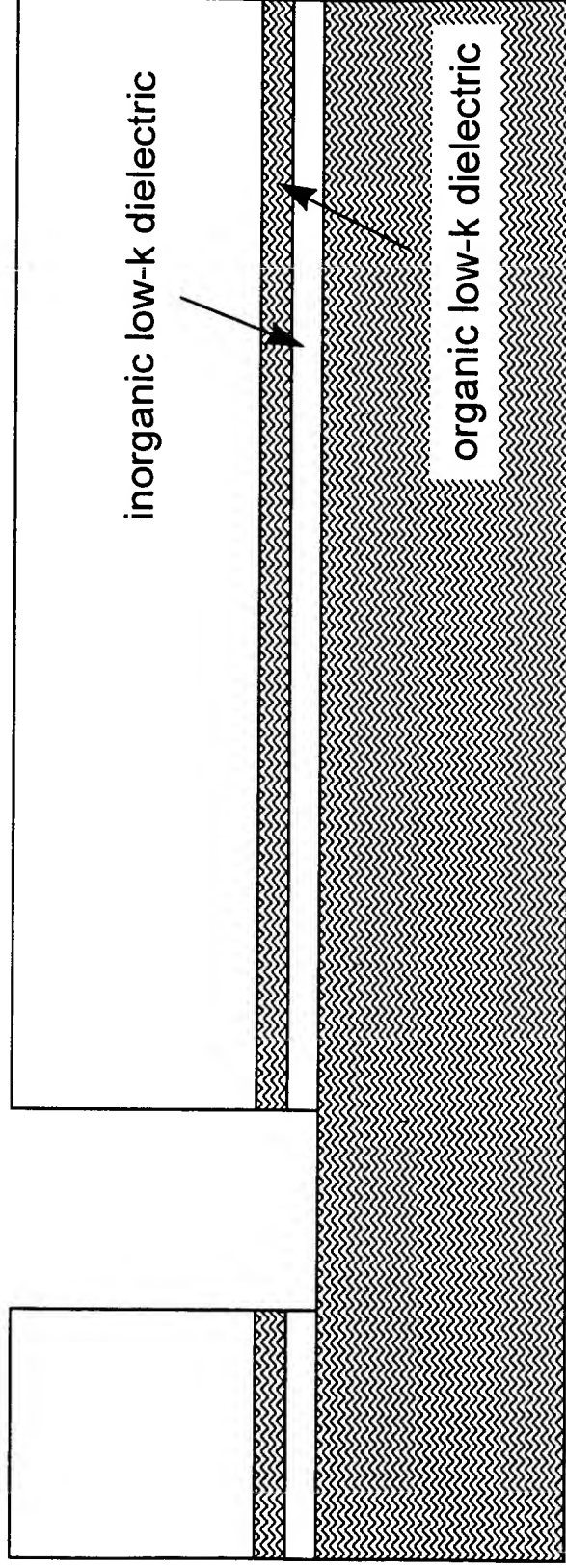


Figure 23

Step 11 Resist spin and bake

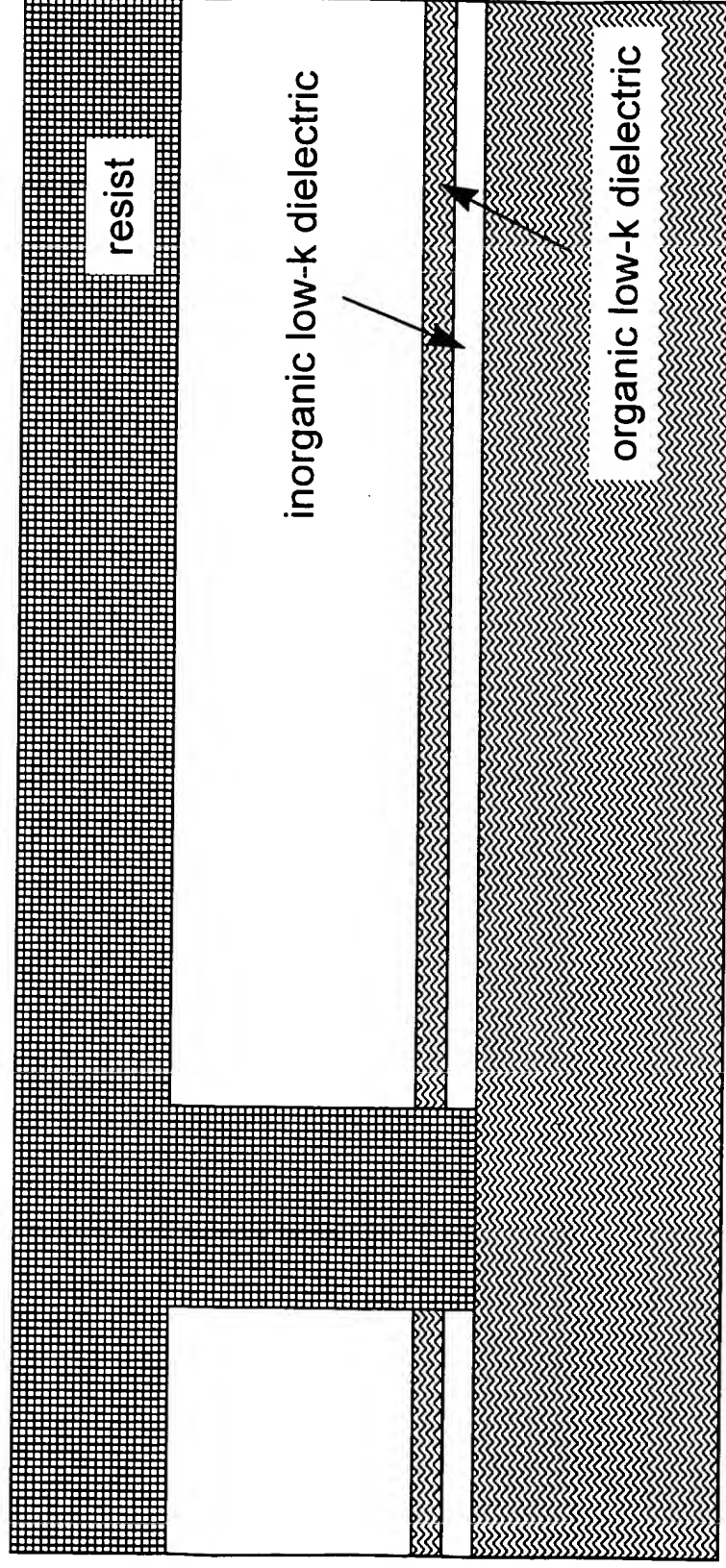


Figure 24

Step 12 Metal trench mask and resist development

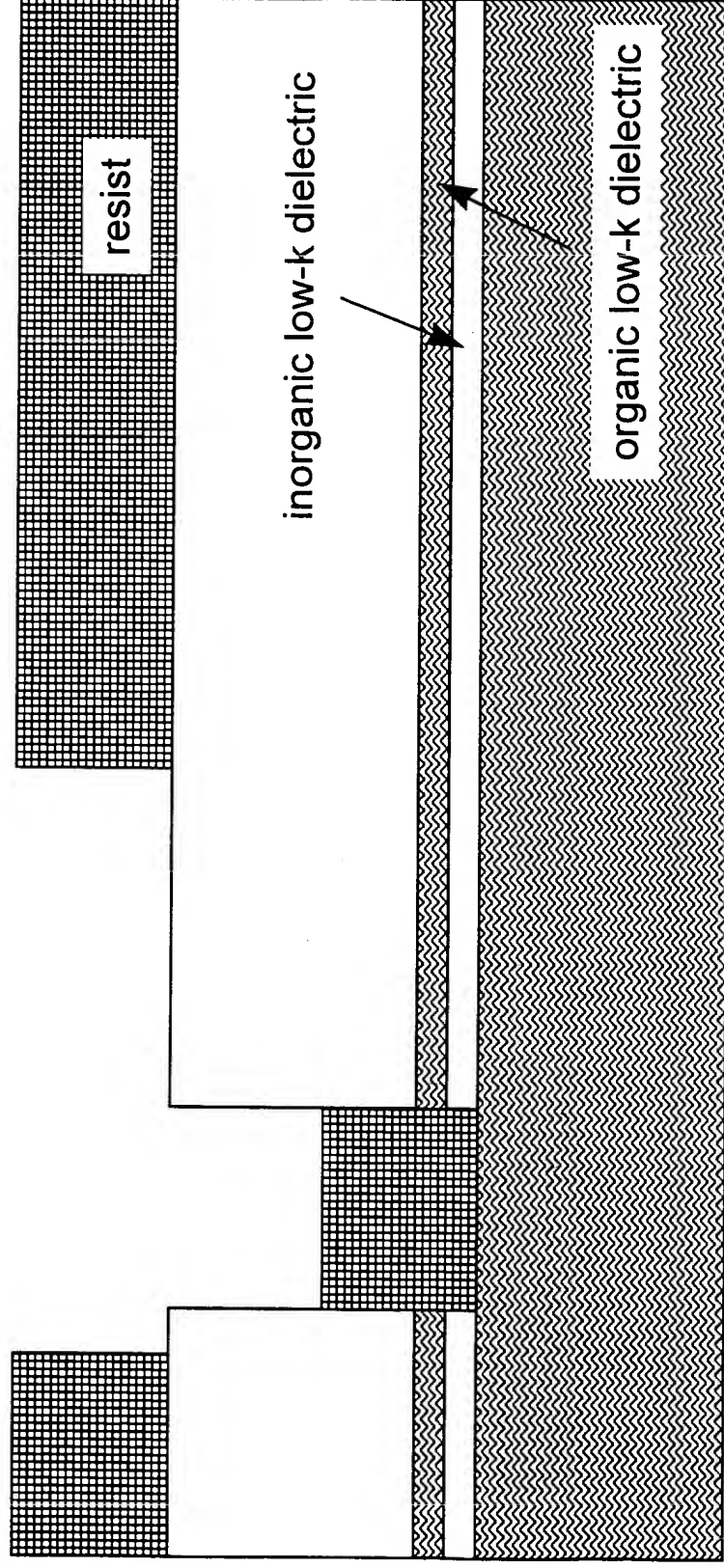


Figure 25

Step 13 Inorganic low-k dielectric etch

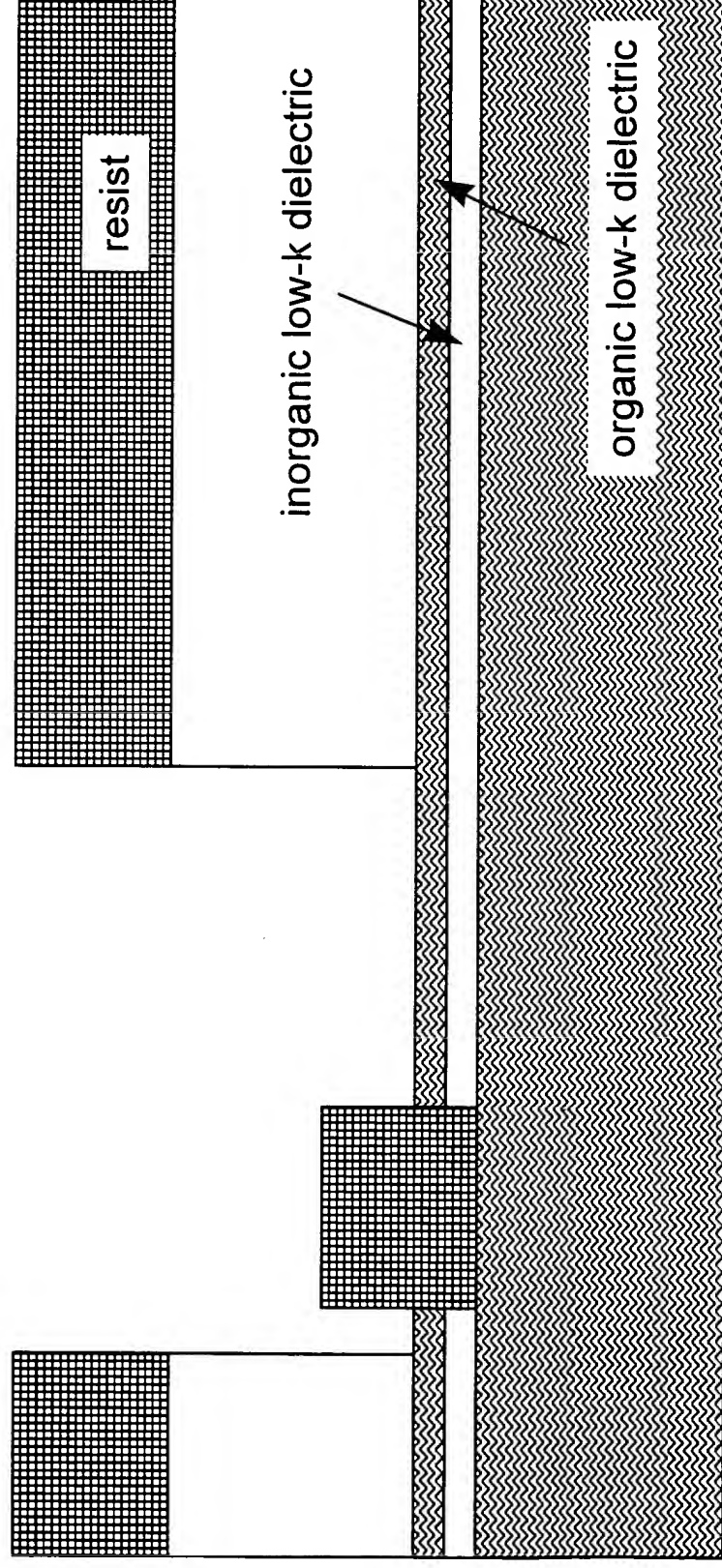


Figure 26

Step 14 Organic low-k dielectric etch

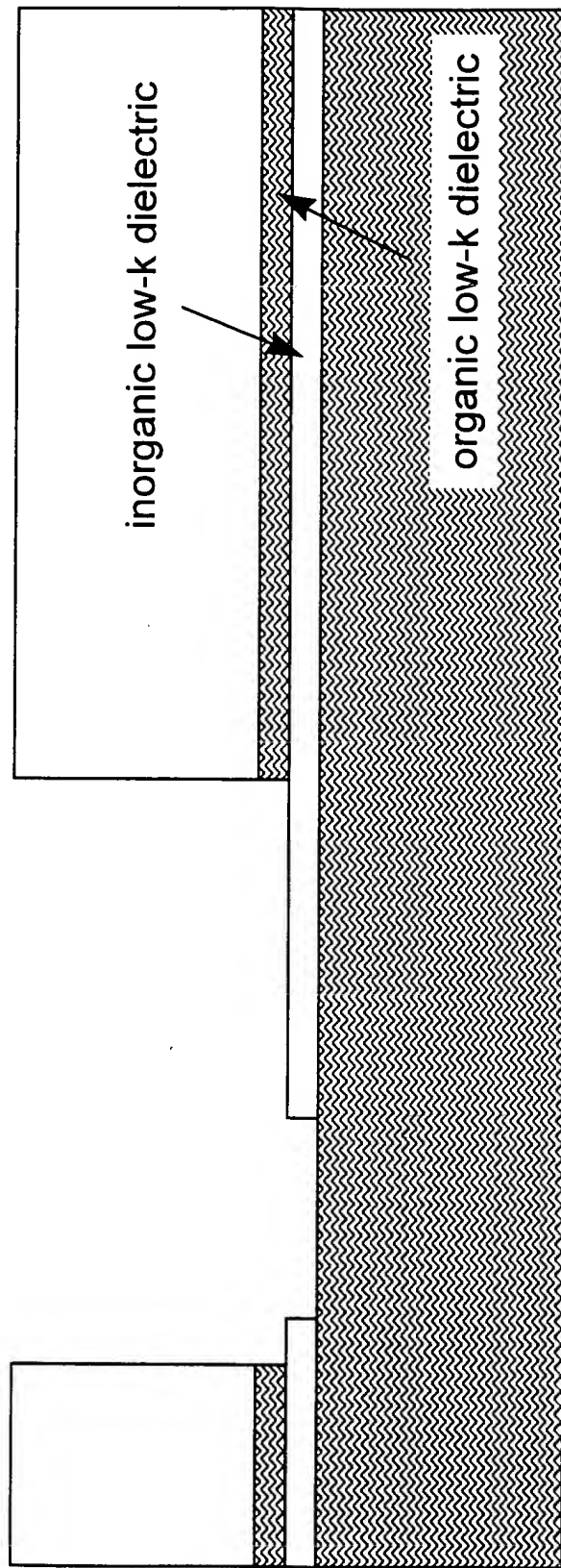


Figure 27

## Step 15 Via inorganic low-k dielectric etch

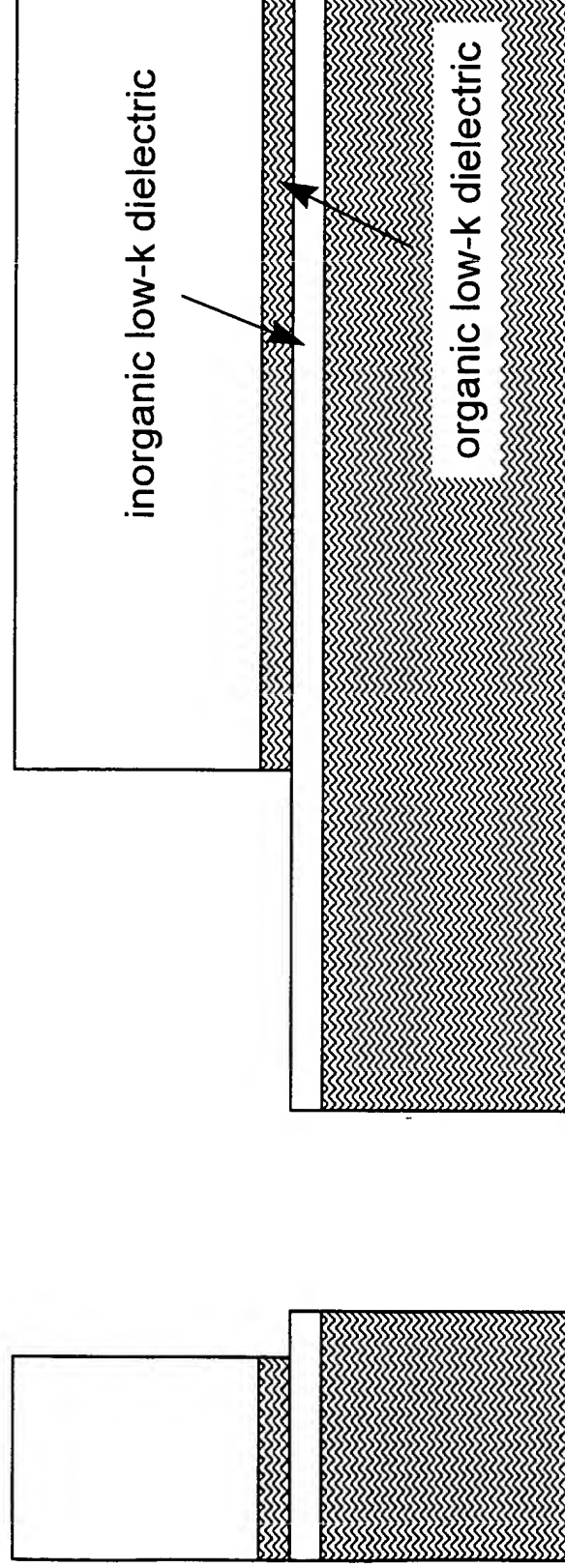


Figure 28

Step 10 Organic low-k dielectric etch

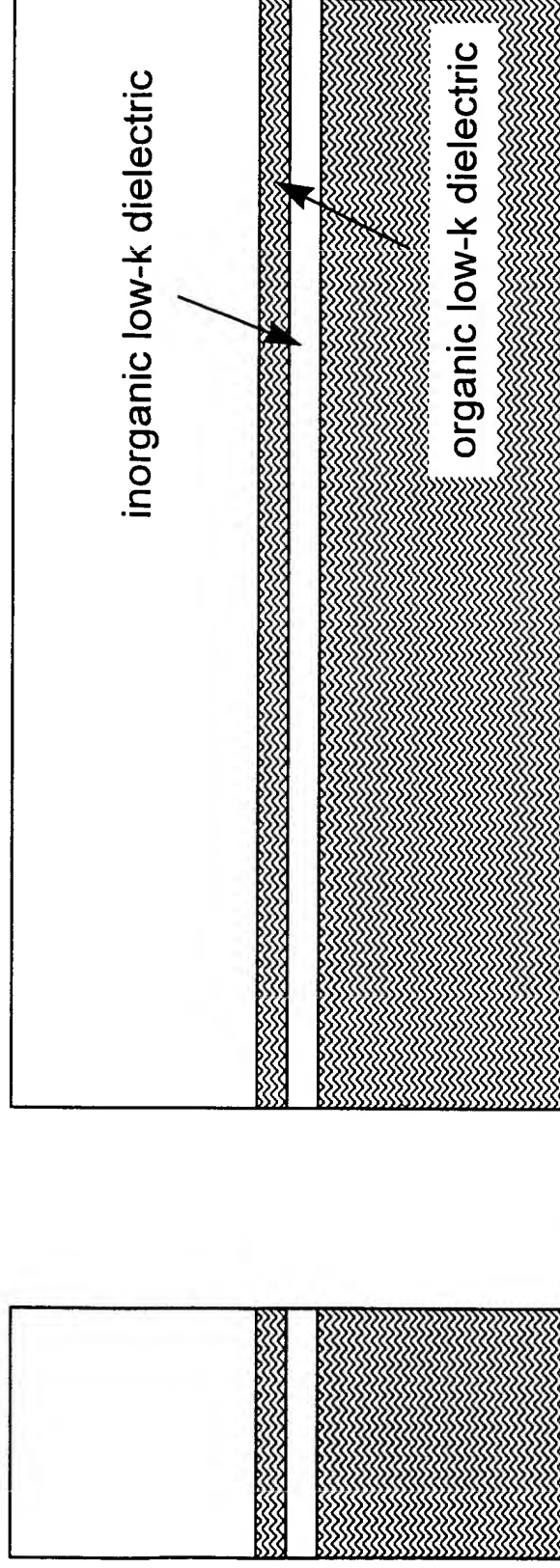


Figure 29

Step 11 Resist spin and bake

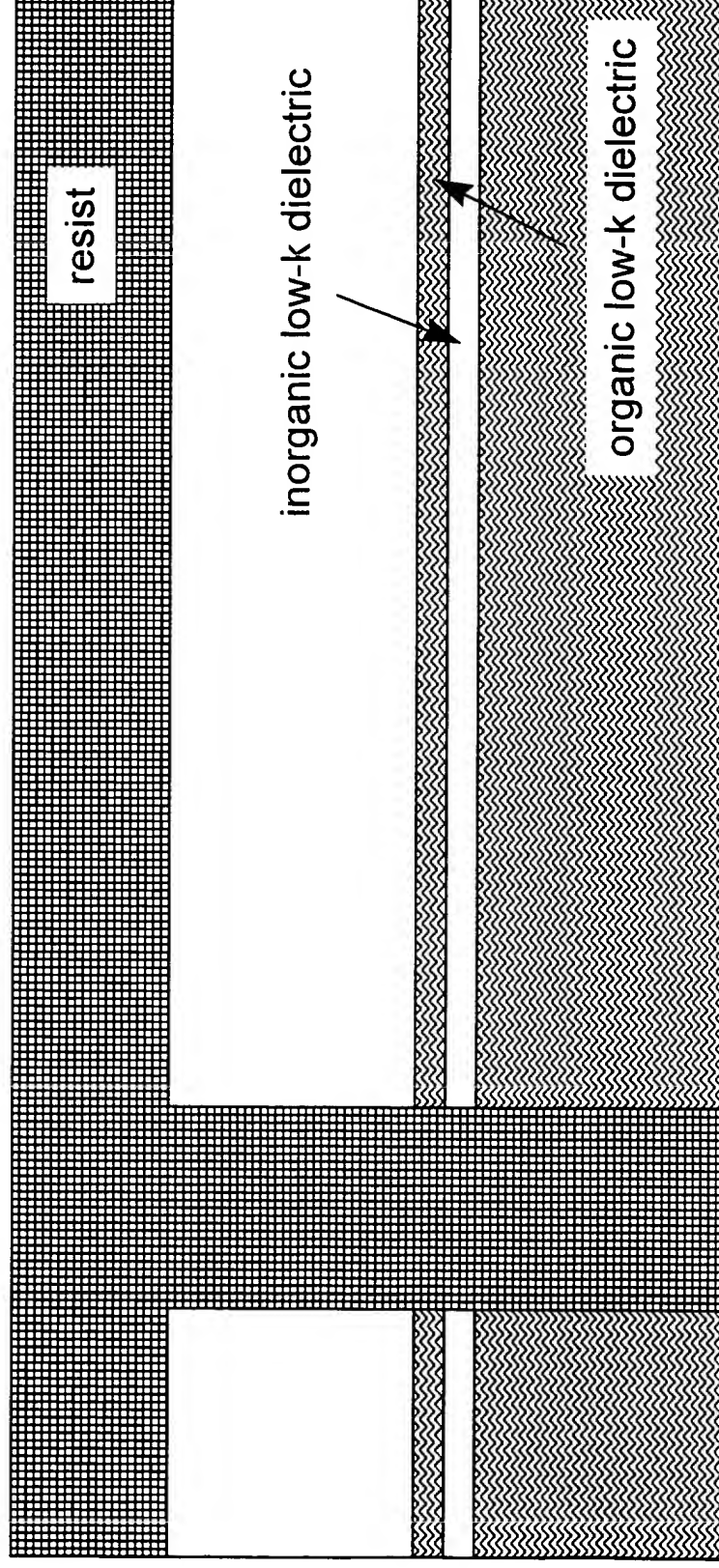


Figure 30

## Step 12 Metal trench mask and resist development

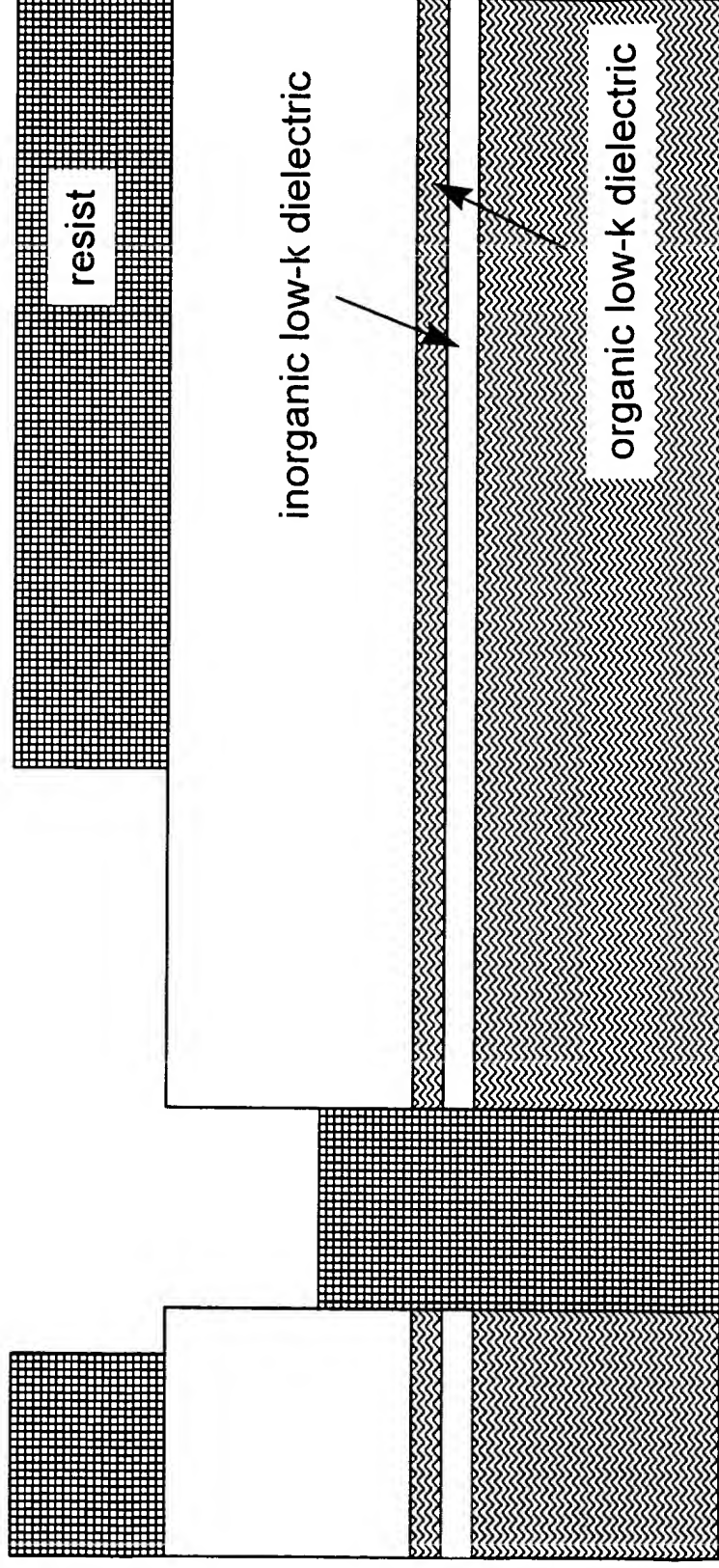


Figure 31

# Step 13 Inorganic low-k dielectric etch

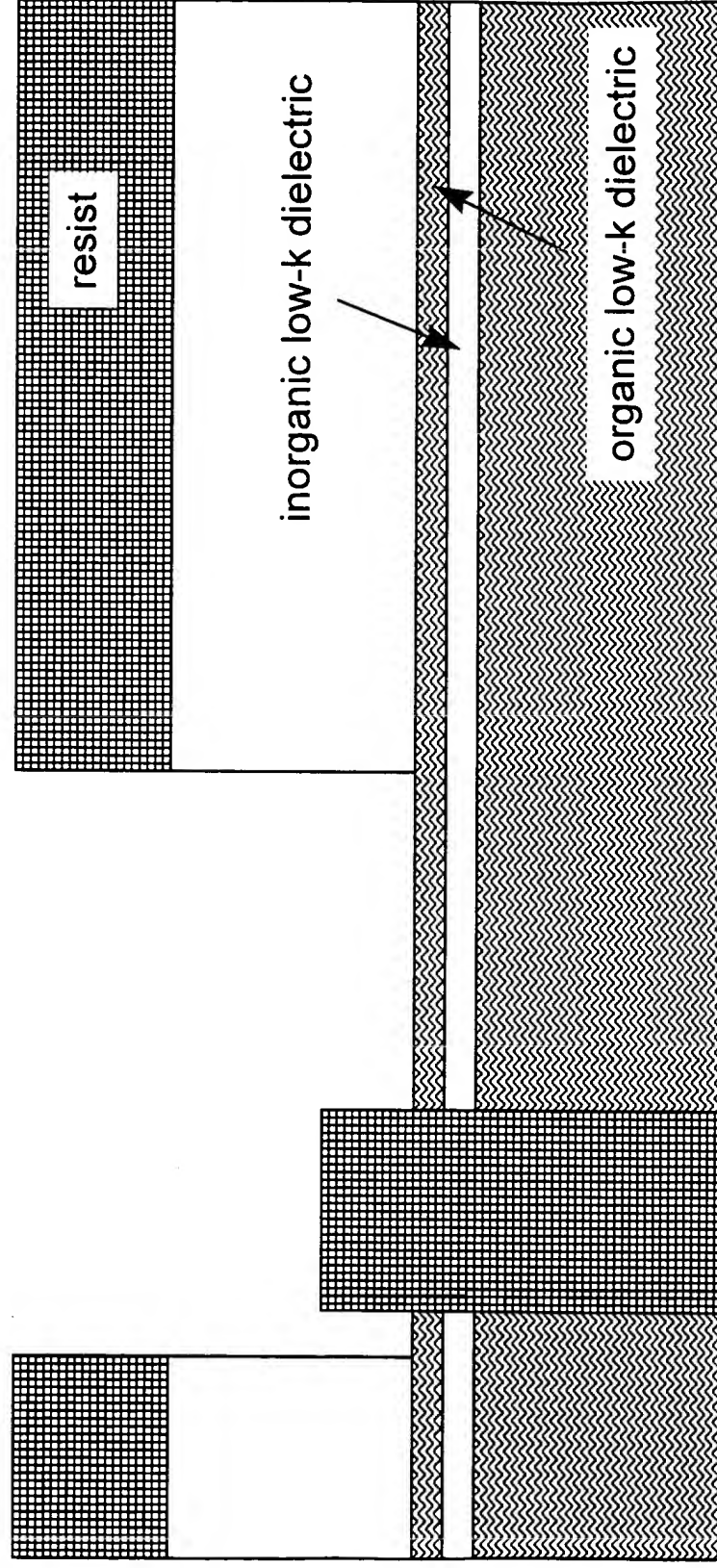


Figure 32

Step 14 Organic low-k dielectric and resist etch

